cause the apparatus at least to deactivate the allocation of the resource by forcing a time alignment timer to expire.

[0075] The at least one memory and the computer program code can be configured to, with the at least one processor, cause the apparatus at least to detect a change in at least one of network load or traffic status of a device of the one or more devices, and to adjust the resource to use for a device of the one or more devices based on the change.

[0076] The at least one memory and the computer program code can be configured to, with the at least one processor, cause the apparatus at least to time division multiplex multiple devices on the same physical uplink control channel resource.

[0077] An apparatus, according to certain embodiments, includes configuring means for configuring, with radio resource control signaling, a physical uplink control channel resource to one or more devices. The apparatus also includes indicating means for indicating to each device of the one or more devices, which part of the resource to use.

[0078] The resource can be at least one of a channel quality indicator resource or a scheduling request resource.

[0079] The resource can further be at least one of an acknowledgment/negative acknowledgment resource, a precoding matrix indicator resource and a rank indication resource.

[0080] The indicating can include indicating with a control information element, such as a medium access control information element.

[0081] The indicating the part of the resource to use can include indicating an alternating even or odd half of the resource, a quarter of the resource, or full use of the resource.

[0082] The indicating the part of the resource to use can include indicating different parts of the same resource to multiple devices.

[0083] The apparatus can include adjusting means for adjusting a periodicity of the resource by allocating partial resources.

[0084] The apparatus can also include activation means for activating or deactivating an allocation of the resource using at least one of an information element, a medium access control command, or radio resource control signaling.

[0085] The activation means can be configured to activate or deactivate the resource using at least one of an information element, a medium access control command or radio resource control signaling.

[0086] The deactivating the allocation of the resource may include forcing a time alignment timer to expire.

[0087] The apparatus can further include detecting means for detecting a change in at least one of network load or traffic status of a device of the one or more devices, and adjusting the resource to use for a device of the one or more devices based on the change.

[0088] The apparatus can additionally include multiplexing means for time division multiplexing of multiple devices on the same physical uplink control channel resource.

[0089] A non-transitory computer readable medium is, in certain embodiments, encoded with instructions that, when executed in hardware, perform a process. The process includes configuring, with radio resource control signaling, a physical uplink control channel resource to one or more devices. The process also includes indicating to each device of the one or more devices, which part of the resource to use.

[0090] The resource can be at least one of a channel quality indicator resource or a scheduling request resource.

[0091] The resource can further be at least one of an acknowledgment/negative acknowledgment resource, a precoding matrix indicator resource and a rank indication resource.

[0092] The indicating can include indicating with a control information element, such as a medium access control information element.

[0093] The indicating the part of the resource to use can include indicating an alternating even or odd half of the resource, a quarter of the resource, or full use of the resource.

[0094] The indicating the part of the resource to use can include indicating different parts of the same resource to multiple devices.

[0095] The process can include adjusting a periodicity of the resource by allocating partial resources.

[0096] The process can also include activating or deactivating an allocation of the resource using at least one of an information element, a medium access control command, or radio resource control signaling.

[0097] The process can include activating or deactivating the resource using at least one of an information element, a medium access control command or radio resource control signaling.

[0098] The deactivating the allocation of the resource may include forcing a time alignment timer to expire.

[0099] The process can further include detecting a change in at least one of network load or traffic status of a device of the one or more devices, and adjusting the resource to use for a device of the one or more devices based on the change.

[0100] The process can additionally include time division multiplexing of multiple devices on the same physical uplink control channel resource.

[0101] One having ordinary skill in the art will readily understand that the invention as discussed above may be practiced with steps in a different order, and/or with hardware elements in configurations which are different than those which are disclosed. Therefore, although the invention has been described based upon these preferred embodiments, it would be apparent to those of skill in the art that certain modifications, variations, and alternative constructions would be apparent, while remaining within the scope of the invention.

1. A method, comprising:

configuring, with radio resource control signaling, a physical uplink control channel resource to one or more devices; and

indicating to each device of the one or more devices, which part of the resource to use.

2. The method of claim **1**, wherein the resource comprises at least one of a channel quality indicator resource or a scheduling request resource.

3. The method of claim **1**, wherein the resource comprises at least one of an acknowledgment/negative acknowledgment resource, a precoding matrix indicator resource and a rank indication resource.

4. The method of claim **1**, wherein the indicating comprises indicating with a control information element, such as a medium access control information element.

5. The method of claim **1**, wherein the indicating the part of the resource to use comprises indicating an alternating even or odd half of the resource, a quarter of the resource, or full use of the resource.